Nature Notes



News and Events from the Missouri Department of Conservation • April/May/June 2014

Conservation

What it means to us

hen the rain poured down on the gravel driveway, trickles of water came together to make streams and rivers. It was a challenge: create a stream that flowed from the top of the drive all the way to the road, a deep and steady stream that could carry a leaf-boat from end to end. Stones and leaf litter dammed side paths, sticks dug a course through obstacles. After hours of building and testing, excitement grew as the boat made it further downstream and eventually flowed onto the road.

Discovery and exploration filled my childhood. I built rainwater streams, dug red clay from the yard to make pottery, gathered, identified and tasted wild plants, caught and learned about daddy long-legs, frogs, snakes. My dad provided a wonderful mix of science and folklore that kept me fascinated-predicting the weather with persimmon seeds one day and quizzing me on tree identification another.

I am part of nature, and I depend on it just as it depends on me. Conservation, to me, includes an understanding of our connection with nature and a determination to preserve that connection through the protection of our resources and by helping future generations connect with nature.

—Amanda Moore Naturalist



Leaf boats encourage exploration and learning, strengthening a child's connection with nature.

I hold dear the natural resources of the state and think that the role Conservation Agents serve to protect and preserve these resources is vital if we are going to have them remain for future generations.

—Matt Wolken Conservation Agent

Conservation is the wise use of the natural resources such as fish, forests, wildlife and water.

More meaningfully to me, conservation is the sharing of my knowledge about the wonders of nature with children of all ages, especially my grandchildren; seeing the spark in their eyes from the excitement they experience.

—Karen Armstrong Education Consultant

Conservation is a holistic approach to enhancing, restoring and maintaining the integrity of our natural communities and their associated flora and fauna.

Conservation is important for our health and well-being because we rely on nature's systems, processes and components.

—Krista Noel Natural History Biologist

Northeast Regional Office and Interpretive Center

3500 S. Baltimore, Kirksville, MO 63501 • mdc.mo.gov/node/279



The Northeast Regional Office and Interpretive Center is located just south of Kirksville on Hwy 63. Come inside to enjoy exhibits, attend programs, purchase permits, and pick up free conservation brochures. Head outside to walk the habitat trail or fish in the stocked pond.

HOURS

Building: Monday-Friday, 8 AM-5 PM Trail and Pond: Daily, 4 AM-10 PM

TO REGISTER FOR A PROGRAM

Programs are free. Call 660-785-2420 to sign up for a program requiring registration. If you are unable to attend a program, please call and cancel as a courtesy to those on the waiting list.

April Events

Knee High Naturalists Once There Was a Wood

April 7 • Monday • 10:30–11:30 AM No registration required (ages 3-6) Discover how habitat changes impact wildlife and forests when we read "Once There Was a Wood." Our "build your backyard" craft will help children understand how backyard habitats can help wildlife.



Creature Feature The Lorax

April 9 • Wednesday 3:30–4:30 PM

No registration required (ages 7-12) Why do we have rules about cutting down trees in forests? Dr. Seuss' "The Lorax" shows what could happen if we did not work so sustain healthy forests. Join us as we read and discuss the story and create our own recipe for a healthy forest.

Knee High Naturalists Trash Bash

April 21 • Monday • 10:30–11:30 AM No registration required (ages 3-6)
April is Trash Bash month, so we are going to spend some time learning about litter and how we can keep nature looking good! A short trail clean-up will be included if the weather permits..

Creature Feature Trash Bash

April 23 • Wednesday • 7–8 PM No registration required (ages 7-12)
April is Trash Bash month, so we are going to spend some time learning about litter and how we can keep nature looking good! We will focus on picking up the trash around the pond and wetlands if the weather permits.



Conservation Celebration

April 26 • Saturday • 10 AM–12 noon *No registration required (all ages)*The combination of Earth Day and Arbor Day make April the perfect month to celebrate how conservation makes Missouri a great place to hunt and fish, as well as providing resources and improving our quality of life. Activities, demonstrations and displays will help your family discover nature, from tree cookie necklaces to forestry demonstrations.

May Events

Knee High Naturalists The Very Clumsy Click Beetle

May 5 • Monday • 10:30–11:30 AM *No registration required (ages 3-6)* Why do click beetles click? Do all beetles do it? Learn about beetles, including the click beetle, when we



All beetles share some common characteristics, including hard outer wings that meet in a straight line. Learn more about beetles like these Hercules (left) and click beetles (right) at Knee High Naturalists!



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read Eric Carle's "The Very Clumsy Click Beetle." We will also make our own clicking, flipping beetles to take home!

Conservation Keepers Beginning Geocaching

May 17 • Saturday • 1-2 PM No registration required (all ages) Geocaching is a great activity to get your family outside exploring nature! Join us to learn how to use a GPS system, locate a cache, and some ways to participate with geocachers around the world. You may check out a GPS unit or bring your own.

Knee High Naturalists Amazing Amphibians

May 19 • Monday • 10:30-11:30 AM *No registration required (ages 3-6)* Both frogs and salamanders are amphibians. These amazing animals can live in the water or on dry ground, and can even breathe through their skin! Come along as we discover more about amphibians.

Creature Feature Amazing Amphibians

May 28 • Wednesday • 3:30-4:30 PM No registration required (ages 7-12) Both frogs and salamanders are

amphibians. These amazing animals can live in the water or on dry ground, and can even breathe through their skin! Come along as we discover more about amphibians.

June Events

Knee High Naturalists Super Senses

June 2 • Monday • 10:30–11:30 AM No registration required (ages 3-6) Sight, sound, smell, hearing, and touch—these are the five senses, right? Wildlife makes use of these five senses, but sometimes they have even more! Join us as we discover the amazing sensory abilities of wild animals.

Conservation Day Camp Adapt or Die! Session I

June 10-12 • Tuesday-Thursday 8 AM-12 noon Register from May 5-June 2 Session I is open to campers entering grades 3-5 in the fall. Campers will explore the adaptions that help plants and animals survive through hands-on activities. A snack will be provided. Call 660-785-2420 for details or to request a registration packet.

Conservation Day Camp Adapt or Die! Session II

June 17-19 • Tuesday-Thursday 8 AM-12 noon Register from May 5-June 2 Session II is open to campers entering grades 6-8 in the fall. Campers will explore the adaptions that help plants and animals survive through hands-on activities. A snack will be provided. Call 660-785-2420 for details or to request a registration packet.

Conservation Keepers Family Fishing

June 21 • Saturday • 1-2 PM No registration required (all ages) Bring the whole family for an afternoon of fishing fun! We will practice some basic fishing skills like knot tying and casting, and finish up the program with fishing in the stocked pond. Bring your own equipment or borrow ours-we'll provide the bait!

Creature Feature Super Senses

June 25 • Wednesday • 3:30-4:30 PM *No registration required (ages 7-12)* Sight, sound, smell, hearing, and touch—these are the five senses, right? Wildlife makes use of these five senses, but sometimes they have even more! Join us as we discover the amazing sensory abilities of wild animals.





Hunter Education

mdc.mo.gov/node/3722



These free courses are required for anyone born on or after January 1, 1967, who wants to hunt with firearms in Missouri. Hunters under 15 years of age who will be hunting with a properly permitted hunter age 18 or over, hunters that are 16 or older and have an Apprentice Hunter Authorization, or landowners or lessees hunting on land that they own or reside upon are exempted from the hunter education requirement. Anyone age 11 or older may take the hunter education course and become certified.

There are two parts of the hunter education requirements, knowledge and skills. The knowledge portion can be completed through one of three options. An online course is available, as well as a self-study guide and a classroom session. Once the knowledge portion is completed, hunters must attend and pass a 4-hour skills session to become hunter education certified. Registration for classes is available online.

If you have any questions about hunter education, please contact Outdoor Skills Specialist Rob Garver by calling 660-785-2420.



Northeast Nature Notes is available by mail, e-mail, and on the MDC website.

To be added to the mail or e-mail registry, or to switch from one to the other, please contact Amanda Moore at amanda.moore@mdc.mo.gov or call 660-785-2420.

The online version of the newsletter is available at mdc.mo.gov/node/17875.

A full event calendar for the Northeast region is also available on the MDC website.

Fun and Free

Stop by the MDC Northeast Regional Office in Kirksville during office hours to check out a Discover Nature backpack. These backpacks give you a self-guided tour of the natural world as you walk the habitat trail.

Backpacks can be checked out at the front desk. Each backpack is loaded with tools and information to enhance your experience, from magnifiers and measuring tapes to field guides and a nature journal.



On the look-out...for bluebirds!

On March 30, 1927, the eastern bluebird was officially designated the Missouri state bird by an act of the Missouri legislature because it was common in Missouri and is a symbol of happiness.

This was an appropriate selection in every respect. Referring to its pleasing color, naturalist Henry David Thoreau once wrote that "it carries the sky on its back." Add to that its delightful song, non-aggressive manner and beneficial food habits, and you have a truly appealing bird. People can even become involved with this state bird by building birdhouses.

Most important for a state symbol, bluebirds are fitting for Missouri. They seem to favor the rolling Missouri countryside where they may be seen flitting about from fencepost to fencepost on any bright spring morning. For those who witness the flash of blue and hear their cheercheeryup song in such a setting, the phrase "bluebird of happiness" takes on a special meaning.

The number of bluebirds in Missouri has varied over time in





Above: The male Eastern bluebird has brighter colors than the female Lower left: A pair of eastern bluebirds bring food to their young.

response to many factors. The Breeding Bird Survey indicates high numbers in recent years. People who believe bluebirds are becoming rare may have moved from the country to the city during their lives or witnessed their local habitat become brushy.

Still, bluebirds are not without problems. The removal of dead trees and branches for firewood or neatness continues to eliminate existing or potential nest cavities. If it were not for the many Missourians who maintain nesting boxes, bluebirds would probably be far worse off.

Bluebirds arrive at nesting sites in February and March. The male selects a nest site and offers the female food. The female accepts the site by bringing nest material. She builds the nest. Second and even third nestings can occur through the summer until as late as August. Nest failure and renesting can alter the latter part of this schedule.

Bluebirds readily accept appropriately placed manmade nest boxes, perhaps because of a shortage of natural nesting cavities. Nest boxes have the added advantage of excluding starlings if the entrance is

1 1/2 inches in diameter. Boxes can increase the local bluebird population and offer many hours of enjoyment.

Place boxes in open, grassy areas with perching sites. Meadows, pastures, savannas, cemeteries or yards that are not too heavily shaded are ideal. It is best if the grass is short. Fence lines, power lines, scattered trees or nearby woods provide good perches. Boxes placed in forests, inner cities, shaded yards, cultivated fields or areas with only tall grass will probably be unsuccessful.

Once a bluebird pair initiates nesting, you can open the box and check the eggs or young until they reach 13 days of age. After that, leave the young alone so that they are not frightened and do not leave the nest too early.

Clean out old nest material as soon as the young have fledged. This will help keep future nests well below the entrance hole and safer from predators. Discard the nest material at a distance so that it is not reused handy nest material may encourage sparrows to nest in the box.

> -Marsha Jones Conservation Agent

Telling Stories

At its core, science is about telling a story. It can't be just any story, though. The scientific method is a way to create a story that helps us understand the world around us. We become curious about something, we question and research to find out what is already known and create a story, a possibility of what might be true. Scientific stories also have to stand up to testing and experimentation. If the story fails the test, it has to be discarded and the whole process starts again.

Last fall, I discovered that one of the gumballs we collected was a home for katydid eggs. I kept the gumball on my desk in a sealed container this winter, waiting for signs of hatching katydids.

One day I noticed what looked like an ant crawling inside the container. I also spotted a single round hole in a couple of the eggs. I assumed an ant had found or made a hole in the container and had chewed through the egg casing to eat the katydid larvae. I searched for the hole thoroughly so I could prevent more ant attacks on the eggs only to discover that the container was intact. Hypothesis disproven.

After thinking about it for a bit, I thought the ant must have been dormant inside the gumball. The



Tiny insect found with katydid eggs

warm temperatures in the office caused it to wake up and take advantage of the only food source, the katydid eggs. I wondered if there might be more, so decided to keep watching the container.

The next day there were two dead ants and one live one in the container. I noticed the ants had wings. Were they something other than ants? I was curious, but decided to put these animals to the back of my mind and focus on more pressing duties.

After a few days, there were about eight dead ants and two live ones in the container. This was so strange I just had to share it. I took the container to our Education Consultant's office. She wondered if there were ant eggs in the gumball that had hatched. I shared my idea of dormant ants and we marveled at the amount of life contained in that small space.

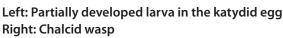
I wondered if our Natural History Biologist had seen katydid eggs, so I stopped by to show her and see what she thought. Her first question was, "Did those insects emerge from the eggs?" I let her know they were katydid eggs and shared the stories we were considering with her, then headed back to my desk.

The word 'emerge' stuck with me as I tried to focus on other things. Could something other than a katydid emerge from a katydid egg? Insects emerging from eggs seemed more reasonable than insects being dormant in a gumball. No matter what else I worked on, I kept coming back to thoughts of emergence. Eventually, I had a light-bulb moment—parasites!

A parasite could emerge from an egg that belonged to a different animal. A bit of research led me to tiny wasps called Chalcid wasps. These parasitoid wasps insert their eggs into the eggs of other insects. The wasp larvae eat the developing larvae of the host insect and eventually chew a hole through the egg casing and emerge. There are many kinds of Chalcid wasps and many of them are host-specific—they will only use one or a few specific species of insect eggs.

There is a Chalcid wasp that prefers katydid eggs. I compared pictures and characteristics of the wasps with my container of dead insects. Finally, the true story was found-I had watched a group of parasitic wasps hatch from the katydid eggs.

-Amanda Moore Naturalist



Below: Twelve parasites emerged successfully, but did







CONSERVATION CELEBRATION



Saturday, April 26 10:00 a.m. - 12:00 noon **MDC Northeast Regional Office**

The combination of Earth Day and Arbor Day make April the perfect month to celebrate how conservation makes Missouri a great place to hunt and fish, as well as providing resources and improving our quality of life.

Activities, demonstrations, and displays will help your family discover nature. Join us to create tree cookie necklaces, watch forester demonstrations, make your own paper, and much more!

All ages are welcome at this FREE family event! Free saplings and door prizes will also be available!

Questions? **Contact Amanda Moore at** (660) 785-2420.

discover nature programs . . .

- · Help Missourians discover and explore nature
- · Provide expert instruction and hands-on activities
- Are available statewide

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Serving nature and you



CONSERVATION DAY CAMP: ADAPT OR DIE!



Tuesday-Thursday

Session I: June 10-12, 2014

Session II: June 17-19, 2014

8:00 a.m. – noon

Northeast Regional Office

Session 1 is open to campers entering grades 3-5 in the fall. Session 2 is open to campers entering grades 6-8 in the fall.

This year's theme is "Adapt or Die!" Campers will explore the adaptions that help plants and animals survive through hands-on activities. Registration is available from May 5 through June 2.

Call (660) 785-2420 for details or to request a registration packet.

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